

ABSTRACT

A process for the preparation of hydrogen and carbon monoxide containing gas from a carbonaceous feedstock involving: (a) partially oxidizing a feedstock in a tubular partial oxidation reactor vessel to obtain a mixture of hydrogen and carbon monoxide; (b) catalytically steam reforming a feedstock in a convective steam reformer which is a tubular reactor with one or more tubes containing a reforming catalyst, wherein the steam to carbon molar ratio of the feed to step (b) is below 1; (c) feeding the steam reformer product to the upper end of the partial oxidation reactor to obtain a mixture of the effluent of step (a) and the steam reformer product; and (d) providing heat for step (b) by convective heat exchange between the mixture obtained in step (c) and the steam reformer reactor tubes to obtain a hydrogen and carbon monoxide containing gas having a reduced temperature.